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Using Press, Ganey Data To Analyze The Relationship Between Age And Patient Satisfaction With Emergency Room Services At Newark Beth Israel Medical Center

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USING PRESS, GANEY DATA TO ANALYZE THE RELATIONSHIP BETWEEN AGE AND PATIENT SATISFACTION WITH EMERGENCY ROOM SERVICES AT NEWARK BETH ISRAEL MEDICAL CENTER

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INTRODUCTION

In today's health care environment a significant emphasis is placed on the financial and technical aspects of medicine. According to Eisenberg, patients do not have the criteria to judge the technical aspects of care, but they are sensitive to its interpersonal aspects (Eisenberg, 2001). As managed care continues to increase competition in health care, interpersonal aspects of medicine will become increasingly critical. While variables such as patient satisfaction are often overlooked, they greatly affect the bottom line and must be considered by both administrators and physicians.

The purpose of this research was to explore the correlation between age and patient satisfaction in an urban Emergency Department. The emergency department studied for this writing is Newark Beth Israel Medical Center, a 669-bed, licensed tertiary medical center with annual emergency visits totaling nearly 80,000. The purpose of this descriptive-correlational study was to describe the relationship with age and patient satisfaction scoring using the Press, Ganey survey tool. The Press, Ganey survey is a likert scale distributed to all E.D. patients 7-10 days following discharge.

LITERATURE REVIEW

In recent years health care has undergone significant changes including: managed care, consolidations, affiliations, closures, bed reductions, professional staff shortages, reimbursement practices, consumerism, and solvency issues. These and other factors have changed the way health care is delivered. Health care facilities, once mission driven, have been forced to behave more like businesses. Although most hospitals are still non-profits, there is an increased focus on retained earnings and market share.

The dramatic shift from mission to finance has caused hospital executives to place patient satisfaction as a core value. There are many factors that influence patient satisfaction including technical competence and psychosocial care. The medical staff tends to focus on the former, whereas the latter tends to have a higher correlation to patient satisfaction scoring (Bruce et al 1998). The competitive environment in health care dictates that the winners will be those that can increase their market share. One way that hospitals are doing this is by initiating patient satisfaction programs. Once thought of as patient amenities, patient satisfaction has now captured the attention of health care executives everywhere. It has evolved into a subspecialty of its own and the subject of intense research.

There are many factors associated with patient satisfaction and many studies performed. However, the lack of uniformity in methodology makes meta analysis difficult. Despite those differences, several variables are associated with patient-satisfaction, including patient-provider communication, patients' understanding of their care, the perceived wait time, and acuity. These factors certainly correlate with patient satisfaction, however, because of the inherent vagueness and the subjectivity involved, it is important to look at issues that may influence the perception of the aforementioned. For instance, communication is an outcome of numerous processes and interpretations and what is considered effective communication for one group could be an absolute disaster for a different group.

The literature offers many definitions of patient satisfaction. Trout et al (2000) defines overall patient satisfaction as being when the patient's own expectations for treatment and care are met (or exceeded). Sun et al (2000) describes satisfaction as a measure of health care quality capturing subjective dimensions of the patient's experience. Hsieh et al (1991) describes patient satisfaction or dissatisfaction as a "complicated phenomenon that is linked to patients' expectations, health status, and personal characteristics, as well as health characteristics." Hsieh's definition is most closely aligned with my research. This

definition is by far the more comprehensive and inclusive than the others studied. Hsieh et al (1991) also hypothesized that patients' expectations would be the best predictor of patient satisfaction and that health status, personal characteristics and health system characteristics were not strong predictors. However, I would argue that health status, personal characteristics, and demographics are all directly related to a patient's expectations, and therefore should not be discounted as a predictor of patient satisfaction.

The financial health of any acute care hospital is significantly impacted by the emergency department. According to the American Hospital Association, most hospitals derive 40-60% of their inpatient admissions through the emergency department. There are also significant diagnostic charges associated with an emergency department visit. The emergency department usually provides the first impression of an institution and greatly influences whether or not a patient returns for other health care needs. Today, many institutions call their emergency department, the "Front Door" of the hospital.

Patient satisfaction is considered an important emergency department goal for multiple reasons. First, patient satisfaction is an indicator of the quality of care provided by the emergency department (Bruce et al 1998). This description is limited and does not address the differences between the patient and caregiver's definition of quality. In general, patients have a minimum expectation that the licensed medical personnel have the technical competence to render care. Many studies are reported on inpatient patient satisfaction, but until recently, emergency department patient satisfaction has gotten less attention.

In one of the earlier studies on Emergency Department patient satisfaction, Bursch et al (1993) reported that the five most important variables in attaining high levels of patient satisfaction in an emergency department were; amount of time it took before being cared for; ratings of how caring nurses were; how organized the emergency department staff was; how caring the physicians were;

and the amount of information the nurses gave about what was happening to them. It is interesting to note that nearly a decade later and following years of research and analysis that Press, Ganey still recognizes four of the five indicators described by Bursch et al (1993) as being the greatest predictors of emergency department patient satisfaction. The only indicator missing from Press, Ganey's assessment is "how organized the emergency department staff was." This was replaced as a high correlation coefficient to patient satisfaction by "being kept informed about delays."

The research supposes that there is a correlation between the age of the patient and patient satisfaction scoring. Sun et al (2000) supports a hypothesis that older patients tend to be more satisfied. Nearney et al (2001) surmises that the age of the patient (greater than 65) may have raised overall satisfaction rates. Watson et al (1999) writes, "Although older patients use emergency department services in greater numbers than do proportionate segments of the general population, generally, they are less likely to seek urgent care inappropriately for minor complaints."

Although the literature suggests that older people tend to account for higher patient satisfaction scores, little research exists on the disparities in patient perception by age group. A literature search reveals data and insight on older patients and their patient satisfaction experience but little work has been published about the expectations of treatment by younger patients. Therefore, many of the conclusions will be anecdotal, based on inference and some observations.

METHODOLOGY

Study Design and Data Collection

The study is based upon the results of the September, 2001 Emergency Department survey respondents. Newark Beth Israel Medical Center utilizes the

Press, Ganey survey tool. Press, Ganey, founded in 1985, is the nation's largest health care measurement firm. Every emergency department patient that is discharged receives a Press, Ganey survey in the mail, usually within 7-10 days from the date of service. The survey is a likert scale consisting of demographic information, such as age, mode of arrival, and sex. Then it is broken down into six sections corresponding with different aspects of service delivery. The six sections include: A. Registration, B. Nurses, C. Emergency Staff Doctors, D. Tests, E. Family & Friends and F. Some Final Ratings. (See Tables 1-7) In total, the survey consists of 30 questions, each with a scale of 1-5, with 1 - being very poor, 2 – poor, 3 – fair, 4 – good and 5 – very good. There is also space designed for additional comments. The additional comments section often provides valuable information that strong inferences can be pulled from. Also you will find a cumulative score. (Please see Attachment 1)

Data used to support this research were culled from 4,555 patients who presented to the Emergency Department in August of 2001. Four percent or 182 returned their mailed questionnaires. However, of the 182 respondents, 143 or nearly 80% provided demographic information. Based upon the demographic information received from the surveys, each question was broken down by age group and a mean score for each question was attained. For purposes of this research, I have used the Press, Ganey age categorization and divided the respondents into five categories by age: 1) 18-34, 2) 35-49, 3) 50-64, 4) 65-79 and 5) over 80.

Results and Analysis

The Press, Ganey survey asks respondents to give their opinions on different aspects of service delivery via a Likert scale. First we look at their perceptions of the quality of the Registration services. The results suggest that age is related to positive perceptions of the Registration process as illustrated in Table 1. We clearly see that older respondents thought that Registration services overall were

more positive than younger respondents. Yet for two of the five indicators of Registration as well as the Overall Score, the 65-79 year old age group ranked them lower than the 50-64 year old age group. The 65-79 year old age group rated the comfort of the waiting room very low (73.2) which brought down the overall score. Interesting, that age group still scored "comfort of waiting" significantly higher than the 18-34 and 35-49 year old age groups. A possible reason for such a low scoring for the 65-79 year old could be that because they generally have higher acuity, the discomfort of waiting was heightened. Also, the younger people generally control the television and tend to watch shows like "Ricky Lake" and "Jerry Springer" which have no appeal to older people.

The age-patient satisfaction relationship is also indicated in respondents' views on nursing. Again, in nearly every category, scores increase with the age of the respondent. One exception, as evidenced in Table 2, shows that the 65-79 group scored lower on almost every question than that of the 50-64 year old group. The 65-79 group was still significantly higher on every question than the 18-34 and 35-49 group but slightly below that of the 50-64 group. Questions 2 and 3, "nurses took problem seriously" and "nurses attention to you" show a 4.4 and a 3.0 respectively decline in scores for the 65-79 group compared to that of the 50-64 year old group. Interestingly enough, the 65-79 group scores "nurses courtesy" significantly higher than the 50-64 year old group, which suggests that there is a difference between courtesy, concern and attention.

Although we see some of the same general trends when evaluating whether the age of the patient has a relationship to the rating of emergency physicians, there are some major differences. (See Table 3) We see that for this service, unlike any others, the 65-79 year old group scored lower than the 35-49 group on several questions, although the overall score is consistent with the hypothesis. Physician services, especially courtesy, comfort and concern were closely aligned for the 18-34, 35-49 and 65-79 group. Perhaps this can be accounted for by the fact that NBIMC is a teaching facility and some older patients are not

comfortable with care being rendered by a resident. Many older people feel disrespected by receiving care from students. They are usually less tolerant and understanding of the training aspect of medicine.

Test and treatments follow the same general trend as the stated hypothesis with a few exceptions. (See Table 4) In overall scoring, we see a decline for the first time in the 80+ group. This can easily be attributed to questions 1 and 3, "skill in taking blood" and "waiting time in x-ray." The 80+ group scored those two questions significantly lower than any other question asked on the survey. The former question can easily be explained by the degree of difficulty that is generally encountered with trying to find usable veins in elderly persons. The latter could just be an aberration.

Table 5 data for patients' perception of how their family and friends were treated clearly supports the hypothesis that is positively related to patient satisfaction. The only exception in this data is a minor difference at the younger age groups, where the 18-34 group rated nearly every question slightly higher than the 35-49 year olds. In the 50-64, 65-79 and 80+; you see significantly higher scores which is an indication that we are accommodating the folks that accompany the patient.

Finally, the final rating section and the all item ratings show that for every age group except the 65-79 scores increase with age. All scores for ages 50 and up are higher than between 18-49, however, there is a slight drop at the 65-79 mark. The number strongly suggests that there is a correlation between patients' perception of care and age.

The results of the research clearly show that for nearly every question asked, the older patient scored the services higher than younger patients. (See Tables 1-6). This is consistent with Regrut (2001) who found that based on the results of an inpatient survey with over one million respondents, patients under age 50 appear to be considerably less satisfied than patients over 50. The work by Regrut

(2001) and this current research clearly demonstrate that there is a significant correlation between the age of the patient and their ratings of satisfaction.

Despite the obvious correlation, there are clearly significant limitations to the research. With only a 4% return rate of the surveys sent, the data can easily be deemed statistically insignificant. Also there could be several other factors that contribute to the scoring of services that are not accounted for, such as patient acuity. It would be valuable if we were able to compare the mean scores of older and younger patients presenting with varying acuities. It would also be helpful to compare patient satisfaction scores by diagnosis. The low response rate along with so many other variables limit one's ability to say with certainty how significant of a factor age is when determining a patient's satisfaction.

The average difference in mean for overall scoring is 23, with the average difference between means for registration being the highest at 27. The lowest difference in means is shared by Physicians and Tests and Treatments at 19. This suggests that Registration services are perceived much higher for older patients than for their younger counterparts. Privacy issues and Comfort of the Waiting Area have the highest difference in means. This suggests that these two items are particularly problematic to our younger patient population. Informed about delays and any criteria relating to waiting (i.e. waiting time to x-ray, waiting time to see the doctor) also have a very high difference in mean.

The results clearly indicate that the most compelling differences in patient perception of services are relegated to comfort, information and waiting. These indicators show that there are major discrepancies with respect to how older patients perceive these services as compared to younger patients.

In order for NBIMC to close the gap in perception by age, they must address those items that have very high differences in mean. My hypothesis that younger patients have less patience is backed up by the numbers. NBIMC needs to

either eliminate or minimize delays in order to satisfy the younger patient. If it is not delays but perception, perhaps NBIMC can provide distraction devices, such as music, television or reading material.

CONCLUSION

Having spent countless hours in the Emergency Department and after interviewing the clinical staff, several common themes relating to presentation for care were evident. Amongst the many recurring themes was the fact that many young people utilize the Emergency Department for primary care. The lower acuity patients generally present with minor symptoms and are usually knowledgeable of their diagnosis. These patients usually want a confirmation of their beliefs, a prescription and a note for work. These patients expect to be in and out in an expeditious manner, however, based on the physician's clinical experience, the medical history of the patient and his presenting symptoms, the physician may order consuming tests to reach an accurate diagnosis. This will not be in line with the patient's expectations and can cause him/her to rate his or her experience lower than perhaps someone with a higher acuity.

If we can accept the assumption that older people generally present with higher acuity and with more co-morbidities than younger people, then it is more likely that they will view extensive testing as being more thorough. Therefore, they will tend to rate their experience higher.

Finally, one of the indicators mentioned earlier that is closely aligned with patient satisfaction is perception of wait time. I propose that younger people are more accustomed to instant gratification as evidenced by the proliferation of fast food, microwaves, drive thrus and other instant results. They want what they want when they want it. However, good quality health care requires careful and thoughtful attention to detail and cannot always be accomplished quickly.

The health care industry is continuously changing due to external factors, such as managed care, increased competition, aging population and patient knowledge. As a result, levels of patient satisfaction shift accordingly. It is important that health care providers are provided with empirical data revealing what actually satisfies patients. Having the capability to evaluate patient satisfaction by age, race, acuity, diagnosis and other variables will go a long way in determining which hospitals will thrive financially.

Although many hospitals have begun to offer hotel like amenities, most data shows that amenities have a relatively low correlation with overall satisfaction. Both younger and older patients will make do with minimal amenities, but not with insensitive care.

It is clear that the success of a hospital or health care system will depend on a long-term commitment to improving services and understanding their customers. As Horse Schultze, President and COO of the Ritz-Carlton Hotel Company and the 1999 Malcolm Baldridge National Quality Award put it, "Unless you have 100% customer satisfaction and I don't mean just satisfied, I mean that they are excited about what you are doing – you have to improve. And if you have 100% satisfaction, you have to make sure that you listen just in case they change...so you can change with them."

Table 1
Relationship of Age to Perception of Registration Services

Label	Question
A1	Helpfulness of registration
A2	Privacy during registration
A3	Insurance-billing process
A4	Comfort of waiting room
A5	Wait-time to be evaluated by nurse*
A OVERALL	Registration Overall

	A1	A2	A3	A4	A5	A OVERALL
Age	mean	mean	mean	Mean	mean	Mean
18-34 (n = 57)	73.1	64.8	67.9	54.2	64.0	64.6
35-49 (n = 35)	80.7	77.2	76.6	68.4	67.9	74.0
50-64 (n = 28)	85.2	80.8	80.0	78.3	72.2	79.8
65-79 (n = 18)	80.0	83.9	81.7	73.2	78.8	78.4
80+ (n = 6)	95.0	95.0	95.0	85.0	87.5	92.5
Difference between high and low mean	22	31	28	31	23.5	28

Average Difference Between Means 27

Table 2

Relationship of Age to Perception of Nursing Services

Label	*Question*
B1	Nurses courtesy
B2	Nurses took problem seriously
B3	Nurses attention to you
B4	Nurses informative re: treatments
B5	Nurses concern for privacy
B6	Technical skill of nurses
B7	Nurses informative re: home care*
B OVERALL	Nursing Overall

	B1	B2	B3	B4	B5	B6	B7	B OVERALL
Age	mean	mean	mean	mean	mean	Mean	mean	Mean
18-34 (n = 57)	77.7	73.7	73.6	66.4	70.5	76.4	79.2	73.0
35-49 (n = 35)	79.5	75.7	74.2	70.6	77.2	78.9	77.3	75.8
50-64 (n = 28)	83.9	88.5	85.7	81.3	87.5	87.0	87.5	86.0
65-79 (n = 18)	89.3	83.9	82.7	80.4	85.4	86.5	87.5	85.0
80+ (n = 6)	100.0	95.8	87.5	95.0	90.0	91.7	100.0	94.6
Difference between high and low mean	23	22	14	29	20	15	21	21

Average Difference Between Means 20.33

Table 3

Relationship of Age to Perception of Emergency Staff Physicians' Services

Label	Question
C1	Waiting time to see doctor
C2	Doctors courtesy
C3	Doctor took problem seriously
C4	Doctors concern for comfort
C5	Doctors informative re: treatment
C OVERALL	ER/ED Physicians Overall

	C1	C2	C3	C4	C5	C OVERALL
Age	mean	mean	mean	Mean	Mean	Mean
18-34 (n = 57)	58.9	78.6	78.6	74.1	76.4	72.2
35-49 (n = 35)	62.1	81.3	79.7	79.0	78.3	74.4
50-64 (n = 28)	76.0	90.4	89.4	86.5	85.0	85.7
65-79 (n = 18)	62.5	80.4	78.6	78.6	80.8	76.0
80+ (n = 6)	87.5	95.8	91.7	95.8	91.7	92.5
Difference between high and low mean	28.6	17	13	22	15	20

Average Difference Between Means 19.33

Table 4
Relationship of Age to Perception of Tests & Treatments

Label	Question
D1	Skill in taking blood
D2	Courtesy of blood technician
D3	Waiting time in x-ray
D4	Courtesy of x-ray technician
D OVERALL	Tests Overall

	D1	D2	D3	D4	D OVERALL
Age	mean	mean	Mean	Mean	Mean
18-34 (n = 57)	70.7	75.0	63.0	75.0	71.8
35-49 (n = 35)	67.6	72.1	61.8	75.0	70.2
50-64 (n = 28)	80.4	83.0	73.5	85.9	80.4
65-79 (n = 18)	85.7	85.7	87.5	87.5	85.7
80+ n = 6)	75.0	85.0	70.0	95.0	81.3
Difference between high and low mean	15	10.7	26	20	15.5

Table 5
Relationship of Age to Perception of Family and Friends Services

Label	Question
E1	Courtesy shown family/friends
E2	Adequacy of into to family/friends
E3	Let family/friends be with patient
E OVERALL	Family of Friends Overall

	E1	E2	E3	E OVERALL
Age	mean	Mean	Mean	mean
18-34 (n = 57)	75.0	72.2	77.8	75.5
35-49 (n = 35)	77.4	70.2	73.8	73.8
50-64 (n = 28)	86.1	80.6	83.8	83.8
65-79 (n = 18)	90.0	90.0	95.0	91.7
80+ (n = 6)	100.0	95.8	100.0	98.6
Difference between high and low mean	25	26	26	25

Average Difference Between Means 25.50

Table 6

Relationship of Age to Perception of Finals Ratings

Label	Question
F1	Informed about delays
F2	Staff cared about you as person
F4	Likelihood of recommending
F6	Likelihood of using E.R. again*
F49	Kept informed progress of treatment*
F77	Ease of parking, access, signs*
F OVERALL	Finals Overall

	F1	F2	F4	F6	F49	F77	F OVERALL
Age	mean	mean	mean	mean	mean	Mean	Mean
18-34 (n = 57)	64.4	70.7	64.9	70.0	69.2	65.7	66.8
35-49 (n = 35)	60.5	74.1	68.5	72.3	71.4	74.0	68.3
50-64 (n = 28)	73.9	86.5	79.0	86.9	79.2	79.2	81.3
65-79 (n = 18)	80.0	79.5	79.5	79.2	77.3	77.5	79.2
80+ (n = 6)	91.7	95.0	91.7	100.0	95.8	62.5	90.3
Difference between high and low mean	31	25	21	30	27	17	24

Attachment 1
Overall Relationship of Age to Patient Satisfaction Scoring

Label	Question
ALL OVER ALL	ALL ITEM OVERALL

	ALL OVER ALL
Age	**Mean**
18-34 (n = 57)	69.6
35-49 (n = 35)	74.1
50-64 (n = 28)	83.6
65-79 (n = 18)	75.1
80+ (n = 6)	92.2
Difference between high and low mean	23

BIBLIOGRAPHY

Eisenberg, L. (2001, May 23/30) "Good Technical Outcome, Poor Service Experience: A verdict on Contemporary Care?" JAMA 285, 2639-2641

Bruce, T.A., et al. (1998, Dec. 13 (a): 31-7 "Factors that Influence Patient Satisfaction in the Emergency Department." Journal of Nursing Care Quality 1057-3631

Trout, A. et al. (2000, June) "Patient Satisfaction Investigations and the Emergency Department: What Does the Literature Say? Academic Emergency Medicine Volume 7, Number 6

Sun, B.C., et al. (2000, May) "Determinants of Patient Satisfaction and Willingness to Return With Emergency Care." Annals of Emergency Medicine 35:5

Hsieh, M.O. et al. (1991, November) "Understanding Patient Satisfaction and Dissatisfaction with Health Care." Health and Social Work Vol. 16, Number 4

Burch, B. et al. (1993, March) "Emergency Department Satisfaction: What Matters Most? Annals of Emergency Medicine 22:586-591

Nerney, M.P. et al. (2001, August) "Factors Associated with Older Patients' Satisfaction with Care in an Inner-City Emergency Department." Annals of Emergency Medicine 38:2

Watson, W.T. et al. (1998, April) "Elderly Patients' Perceptions of Care in the Emergency Department." Journal of Emergency Nursing Volume 25, Number 2 88-92

Regrut, Beth A. (2001, October) "The Boomer Consumers and HealthCare, Press, Ganey Archived Articles
http://www.pressganey.com/research/resources/satmon/text/bin/b.shtm